FINE PARTICLE SEPARATION TREATMENT SYSTEM AND CYCLONE SEPARATOR

ABSTRACT OF THE DISCLOSURE

The present invention provides a fine particle separation treatment system ~~comprising~~containing: a storage tank for storing a solution; a solution circulating passageway for circulating the solution in the storage tank, ~~and~~a cyclone separator disposed in the solution circulating passageway for separating fine particles in the solution~~. The cyclone separator comprises: an inlet passageway communicating with a solution outlet side of the storage tank; a flow-out passageway communicating with a solution outlet side of the storage tank; a cyclone portion for generating en eddy flow at a given flow rate by feeding a fine particle-containing solution from the inlet passageway, transferring the fine particles to the outer side by a centrifugal force to issue the solution after separating the fine particles from the flow-out passageway, and precipitating the separated fine particles by decelerating the eddy flow;~~ and a particle trap box for trapping the precipitated fine particles in the cyclone portion through a communication hole. An electrode rod is disposed at the center of the particle trap box, and the fine particles are electrically separated by applying a potential between the electrode rod and an electrode of the particle trap box.